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“Step Out From the Old to the New”

IS 8157 (1976): Forceps, Granulation, Heath's Pattern [MHD  
4: Ear, Nose and Throat Surgery Instruments]

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**“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”**

Bhartṛhari—Nītiśatakam

“Knowledge is such a treasure which cannot be stolen”





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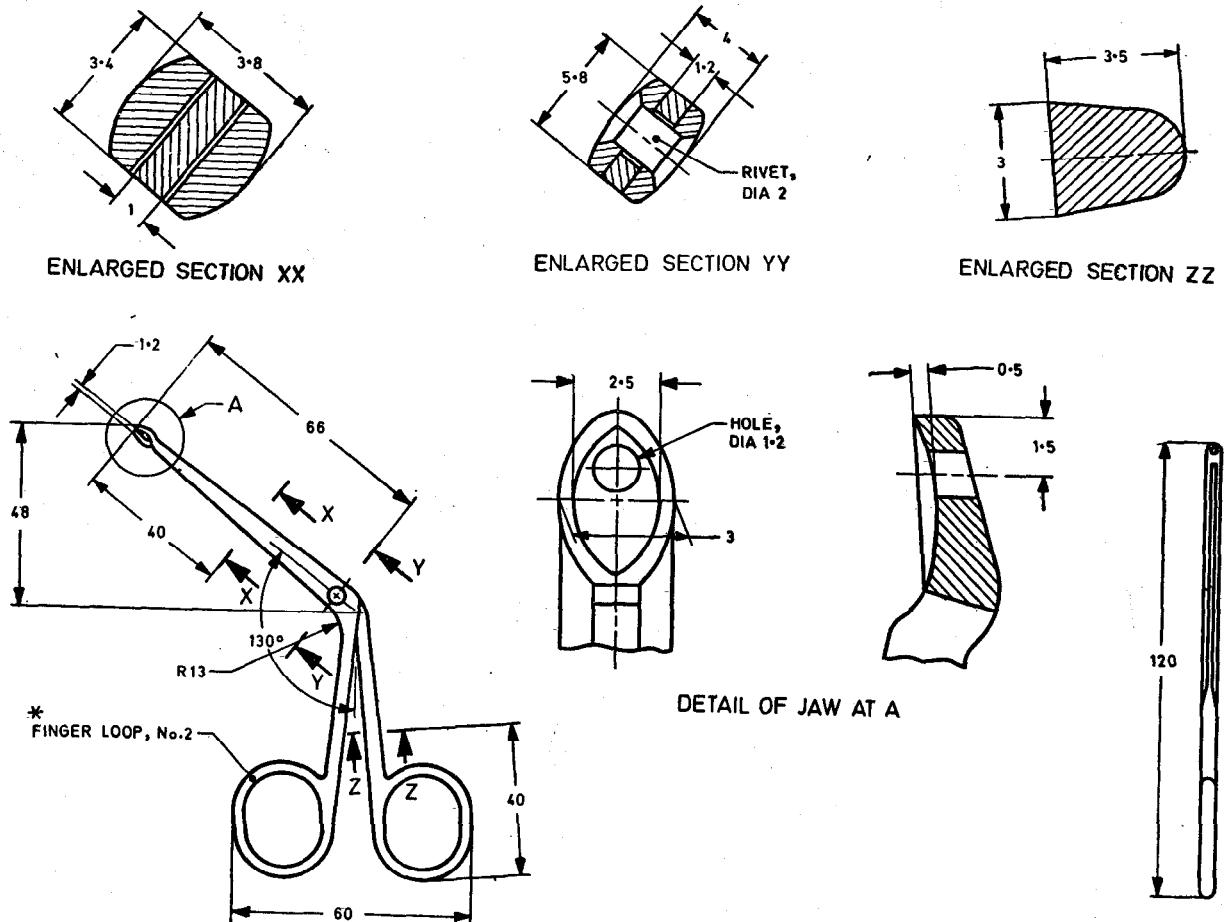


Indian Standard

## SPECIFICATION FOR FORCEPS, GRANULATION, HEATH'S PATTERN

**1. Scope — Dimensions and other requirements for Heath's pattern granulation forceps used in ENT surgery.**

**2. Shape and Dimensions — As shown in Fig. 1.**



\*See IS : 3642-1966 'General requirements for surgical instruments'.

All dimensions in millimetres.

**FIG. 1 FORCEPS, GRANULATION, HEATH'S PATTERN**

**2.1** A deviation of  $\pm 2.5$  percent shall be allowed on all dimensions.

**2.2 Joint —** As specified in 6 of Section 2 of IS : 3642-1966. The joint shall be riveted.

**2.3 Finger Loops —** Finger loops shall conform to Size 2 of Section 5 of IS : 3642-1966.

### 3. Material

**3.1** Stainless steel conforming to Designation 30Cr13 or 20Cr13 of IS : 6603-1972 'Specification for stainless steel bars and flats'.

#### 4. Workmanship and Finish

- 4.1 The surfaces of the forceps shall be free from burrs, pits, cracks and other surface defects.
- 4.2 The forceps shall be symmetrical and well balanced.
- 4.3 All edges shall be smoothly rounded and shall not be sharp.
- 4.4 The arms shall move freely and easily at the joint and there shall be no side play at the joint.
- 4.5 When forceps is closed the spoon shaped working ends shall coincide with each other.
- 4.6 Forceps shall be polished bright and passivated.
- 4.7 The hole on the spoon shaped working ends shall be well formed and shall be nowhere sharp.

5. Heat Treatment — The forceps shall be uniformly hardened and tempered to a hardness of 380 to 420 HV.

#### 6. Tests

##### 6.1 Flexibility Test

6.1.1 A force of moderate degree shall be applied by thumb and fingers to each shank at right angles to the long axis of the shank and in the plane of the finger loops. This shall be repeated at several points along the shanks. The test shall then be repeated in a plane at right angles to the first. On completion of the test the shanks shall not acquire a new permanent set.

6.1.2 The working ends of the jaws shall be made to bite a piece of vulcanized rubber sheet 5 mm thick and the forceps be closed with a moderate degree of force. On opening the forceps it shall show no sign of damage.

6.2 Corrosion Resistance — The forceps shall satisfy the boiling and autoclaving test as mentioned in IS : 7531-1975 'Method for boiling and autoclaving test for corrosion resistance of stainless steel surgical instruments'.

7. Marking — Each forceps shall be marked with the manufacturer's name, initials or recognised trade-mark.

7.1 ISI Certification Marking — Details available with the Indian Standards Institution.

8. Packing — Each forceps shall be wrapped in moisture-proof paper or packed in polyethylene bags. The forceps shall be suitably protected by wrapping in cotton wool. The forceps may also be packed as agreed to between the purchaser and the manufacturer.